

What is claimed:

- 1           1.     A method for treatment of neuropsychiatric disorders which comprises administration  
2     of a D-serine transport inhibitor at a dose sufficient to enhance NMDA receptor-mediated  
3     neurotransmission in vivo.
- 1           2.     The method of claim 1 wherein the disorder is associated with decreased *N*-methyl-D-  
2 aspartate (NMDA) receptor-mediated neurotransmission.
- 1           3.     The method of claim 1 wherein the disorder is a psychotic disorder.
- 1           4.     The method of claim 3 wherein the psychotic disorder is schizophrenia
- 1           5.     The method of claim 1 wherein the disorder is Alzheimer's disease, bipolar illness,  
2 depression and anxiety disorders, stroke or epilepsy.
- 1           6.     The method of claim 1 wherein the disorder is age associated memory impairment,  
2 closed head injury or attention deficit disorder.
- 1           7.     The method of claim 1 wherein such agent is administered orally.
- 1           8..    The method of claim 1 wherein a D-serine transport inhibitor is administered  
2 parenterally.
- 3           9.     A method for augmentation of *N*-methyl-D-aspartate receptor-mediated  
4 neurotransmission in vivo which comprises administration of a D-serine transport antagonist.
- 1           10.    The method of claim 1 or 9 wherein the antagonist is an inhibitor of D-serine transport  
2 mediated through system ASC.

1 11. The method of claim 1 or 9 wherein the antagonist is an inhibitor of systems L, N, A  
2 or Gly.

1 12. The method of claim 1 or 9 wherein the antagonist is an inhibitor of alanine-sensitive  
2 D-serine transport.

1 13. The method of claim 1 or 9 where the antagonist is an inhibitor of alanine-insensitive  
2 D-serine transport.

1 14. The method of claim 1 or 9 wherein the agent is glycyldodecylamide, D-serine  
2 dodecylamide or D-alanine dodecylamide.

1 15. The method of claim 1 or 9 wherein the agent is used in combination with typical or  
2 atypical antipsychotics administered orally, parenterally or by depot formulation.

1 16. The method of claim 1 or 9 wherein the agent is used in combination with other  
2 treatments commonly used in schizophrenia, including but not limited to antidepressants, mood  
3 stabilizers, or antianxiety agents.

1 17. The method of claim 1 or 9 wherein the agent is used in combination with a glycine  
2 transport inhibitor.

1 18. A composition for treating schizophrenia incorporating a D-serine transport inhibitor.

1 19. A composition of claim 18, wherein the inhibitor is glycyldodecylamide, D-serine  
2 dodecylamide or D-alanine dodecylamide.

1 20. A composition of claim 18 wherein the inhibitor is a derivative of serine or alanine  
2 having effectiveness in inhibiting D-serine transport in vivo.

1 21. A composition of claim 18 wherein the D-serine transport inhibitor is combined  
2 with a typical or atypical antipsychotic agent administerable orally or parenterally.

1 22. A composition of claim 20 wherein the derivative is a hydrophobic derivative of  
2 serine or alanine.

1 23. A composition of claim 22 wherein the derivative is serine or alanine having a  
2 hydrophobic group linked to at least one of the C- and N- terminus.

1 24. A composition where the hydrophobic group is selected from the group consisting  
2 of alkyl (C1-C13), unsubstituted or substituted phenyl, phenylalkyl (C1-C13), cyano, halogen and  
3 or haloalkyl (C1-C13)..

1 25. A method of claim 1 wherein a composition of claim 20 is used.

1 26. A method of claim 9 wherein a composition of claim 20 is used.